



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Current Transducer HAW 03 .. 20-P

$$I_{PN} = 3 \dots 20 \text{ A}$$

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

Preliminary



Electrical data

Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_p (A)	Primary Conductor Diameter (mm)	Type
3	± 7.5	0.8	HAW 03-P
5	± 13	0.9	HAW 05-P
10	± 25	1.1	HAW 10-P
15	± 38	1.4	HAW 15-P
20	± 50	1.6	HAW 20-P

V_C	Supply voltage ($\pm 5\%$)	± 15	V
I_C	Current consumption	$< \pm 18$	mA
V_d	R.m.s. voltage for AC isolation test, 50/60Hz, 1 mn	2.0	kV
R_{IS}	Isolation resistance @ 500 VDC	> 500	M Ω
V_{OUT}	Output voltage @ $\pm I_{PN}$, $R_L = 10 \text{ k}\Omega$, $T_A = 25^\circ\text{C}$	± 4	V
R_{OUT}	Output internal resistance	100	Ω
R_L	Load resistance	> 10	k Ω

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2000 V
- Low power consumption
- Extended measuring range ($2.5 \times I_{PN}$)

Advantages

- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference.

Applications

- DC motor drives
- Switched Mode Power Supplies (SMPS)
- AC variable speed drives
- Uninterruptible Power Supplies (UPS)
- Battery supplied applications
- Inverters

Accuracy-Dynamic performance data

X	Accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$ (without offset)	$< \pm 1$	% of I_{PN}
ϵ_L	Linearity ($0 \dots \pm I_{PN}$)	$< \pm 1$	% of I_{PN}
V_{OE}	Electrical offset voltage, $T_A = 25^\circ\text{C}$	$< \pm 40$	mV
V_{OH}	Hysteresis offset voltage @ $I_p = 0$; after an excursion of $1 \times I_{PN}$	$< \pm 20$	mV
V_{OT}	Thermal drift of V_{OE} max.	± 1.5	mV/K
TCE_G	Thermal drift of the gain (% of reading)	± 0.1	%/K
t_r	Response time @ 90% of I_p	< 3	μs
f	Frequency bandwidth (-3 dB) ¹⁾	DC .. 50	kHz

General data

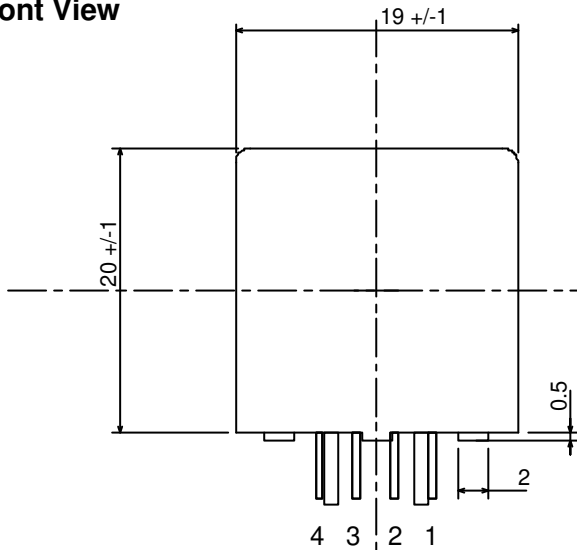
T_A	Ambient operating temperature	- 10 .. + 75	$^\circ\text{C}$
T_S	Ambient storage temperature	- 15 .. + 85	$^\circ\text{C}$
m	Mass	12	g

Notes : EN 50178 approval pending

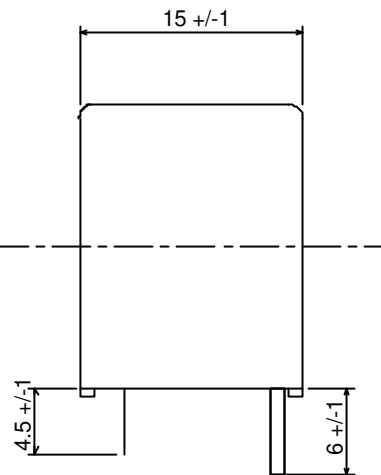
¹⁾ Derating is needed to avoid excessive core heating at high frequency.

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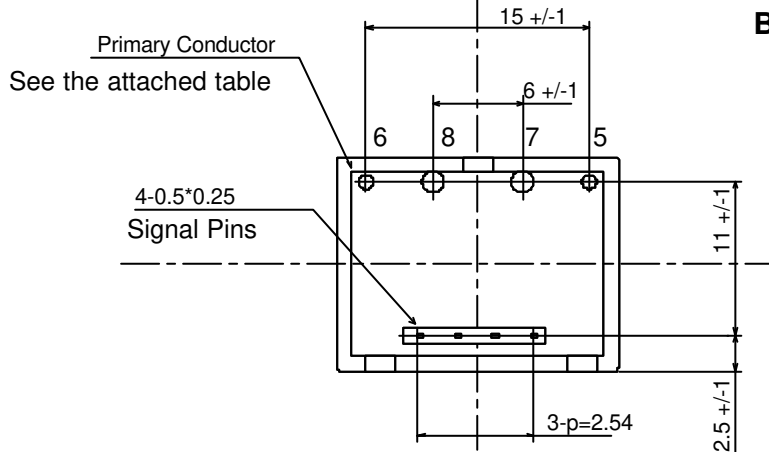
Front View



Right View



Bottom View



Terminal Pin Identification

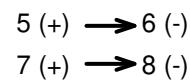
Primary Conductor

Part No.	Pin No.	Diameter
HAW 03-P	5-6	0.8 d
HAW 05-P	5-6	0.9 d
HAW 10-P	7-8	1.1 d
HAW 15-P	7-8	1.4 d
HAW 20-P	7-8	1.6 d

Signal Pins

1	-Vcc
2	0V
3	+Vcc
4	Output

Direction of Current Flow



UNIT : mm